Draft Editorial

This issue of *Physiological Measurement* follows the successful 16th International Conference on Electrical Bio-impedance and 17th International Conference on Biomedical Applications of Electrical Impedance Tomography (EIT) held in Stockholm, Sweden, 19-23rd June 2016, hosted by Karolinska Institutet and KTH Royal Institute of Technology. The next conference, which is the 18th International Conference on Biomedical Applications of Electrical Impedance Tomography (EIT), is due to take place at Dartmouth in June 2017.

The conference provided a unique platform for investigators bring together researchers in all aspects of Bio-impedance and EIT to engage in common areas of interest whilst also allowing an opportunity for the community to broaden its outlook in the areas of clinical applications and new technologies associated with both these areas along with industry. A number of key organizations sponsored the conference, these include the City of Stockholm, the County of Stockholm, Dräger, Eliko, Impedimed, Physiological Measurements, SciBase, Sciospec, Swisstom, and Zürich Instruments. This continues the tradition of successful conferences on biomedical applications of Bio-impedance and Electrical Impedance Tomography.

This issue contains papers stemming from discussion and feedback during the 2016 conference in these research areas. It was also an opportunity for new researchers to join the community and introduce recent innovations. The keynote speakers included Nobel Laureate Ivar Giaver, who shared the Nobel Prize in Physics already 1973 for his work on conduction mechanisms in the solid state, and has been involved in biological applications of physics ever since. There were 102 oral presentations (52 non-EIT + 50 EIT) and 57 posters (34 non-EIT + 23 EIT). A total of 196 attendees registered for the whole conference, plus 14 who registered for one or two days only, totaling 210 attendees (including invited keynote speakers).

Summing up all accepted contributions to the conference totaled 159; all authors were invited to prepare new peer-reviewed papers for inclusion in this issue of *Physiological Measurement*. The manuscripts were put through a process of careful review before selection. A total of **??** were accepted covering an important range of topics.

EIT and Bio-impedance continues to provide new challenges and attract more researchers into this area. The high quality of the research papers in this focus issue is clear evidence of the significant advances in the field. It is also encouraging to see the increase in the number of industry companies and clinical interest. There is considerable potential to prove a new clinical tool specifically for respiratory lung function, the challenge over the next years is for this technology to be adopted as a tool of choice. However there are still challenges that need to be addressed regarding the parameters that these technologies could bring to the in-care needs of patients. Parameters that indicate the clinical state of the patient and provide guidance to the intervention made by clinicians are key to progressing these technologies. This will become the key to the future success of this research field.

Prof Richard Bayford, Middlesex University, London, UK

Prof Stig Ollmar, Karolinska Institutet, Stockholm, Sweden